Monthly Status Report: UCSF, ICR, Ajay N. Jain

Integrated Cancer Research Workspace

March 2005

1. Statement of Progress

Primary project management effort by Dr. Jain related to aspects of contract administration. In addition, UCSF participated by attending teleconference meetings in the ICR Workspace, in particular the Data Analysis and Statistical Methods, Pathways, and Microarray SIGs (Jain, Kingsley, Novak, Tokuyasu).

The specific highlight in the Magellan project involved development of a test approach document in collaboration with our adopters. For the QPACA project, the key highlight was adoption of QPACA by our adopters, which entailed several aspects of Magellan integration.

2. Progress Description

The following details our progress in our two ICR developer projects (Magellan and QPACA). Implicit in the descriptions for each is general participation in the ICR Workspace. Note that participation in the Array SIG is listed under the Magellan project, due to the integration tasks required with caArray.

Magellan

Task 1: Project Management

Major Accomplishments:

- Moderated the April 1, 2005 Data Analysis and Statistical Tools Meeting. This included setting the agenda and booking speakers. (Kingsley)
- Attended the caBIG Annual meeting in Bethesda, MD. (Kingsley, Jain)
- Attended the AACR meeting in Anaheim. Spoke at the caBIG session of the AACR meeting at the invitation of Ken Buetow, and manned the NCI booth. (Kingsley)

Activities Planned for next month

- Continue meeting attendance. (All)
- Complete use case document. (Kingsley, Jain)

Task 2: Project Activities

Major Accomplishments:

- Completed Test Approach Document and got approval from adopters. (Kingsley)
- Began work on pooled database connections within Magellan. (Kingsley)
- Began development of caBIO use case document. (Kingsley, Jain).

Activities Planned for next month

- Work with Adopters on Use Case document and complete the Magellan caBIO interoperability assessment.

QPACA

Task 1: Project Management

Major Accomplishments:

- 4/5/05 - Pathway SIG teleconference. (Novak)
- 4/12-05 - 4/13/05 - caBIG annual meeting. (Novak, Jain)

Activities Planned for next month

- Continue meeting attendance. (All)
- Continue work on QPACA/Magellan integration. (Novak)

Task 2: Project Activities

Major Accomplishments:

- Finished initial integration of QPACA computational analysis with Magellan. (Novak)
- Deployed QPACA to Adopters through the Magellan interface. (Novak)
- Continued testing of QPACA algorithms on multiple data sets. Publication that was submitted to Nucleic Acids Research describing QPACA received favorable reviews. Revisions are underway. Addresses aspects of Tasks 2.2 and 2.3. (Novak, Jain).

Task 2.3: Summary of web access configuration and Adopter training for current version of QPACA

The current version of QPACA's quantitative analysis tool was made available to Adopters at OHSU via integration with the Magellan data system. The QPACA analysis tools are accessed through Magellan's Analysis Pages, allowing use of the

Magellan system for database access and data storage. The Magellan data system allows for storage, selection, and annotation of data that can then be directed to the QPACA analysis page which allows specification of parameters necessary for the analysis. This JSP front end then calls the underlying analysis tools (written in C and Perl). Analysis results are presented as a set of tab-delimited text files.

The initial meeting with the OHSU Adopters occurred at the caBIG Annual Meeting in mid-April, at which time they were given an overview of the system as well as a short presentation of its capabilities. They were given access to the system via the web interface on April 21, 2005. They were also provided with a sample dataset and several sample pathways (both yeast and human). Additional training was conducted over e-mail as well as during the ICR face-to-face meeting on May 2nd and 3rd.

Task 2.4 - QPACA-Magellan interoperation feasibility study summary
Rather than address QPACA-Magellan interoperation through a formal study prior to integration, it was decided that the best way to enable adoption was to complete integration of aspects of QPACA tools with Magellan, which would also demonstrate the feasibility of interoperation.

QPACA-Magellan interoperation feasibility has been demonstrated through integration of the QPACA quantitative analysis tools with Magellan (completed in April). In making QPACA accessible to our Adopters at OHSU, we have down directly that interoperation with Magellan is possible. QPACA was integrated via Magellan's Analysis Pages, which provide an easy mechanism for integrating new analysis tools into the Magellan system.

Activities Planned for next month

- Continuation of integration of QPACA with Magellan, specifically the visualization aspects.
- Continued interaction with adopters regarding their experiences with QPACA.
- Completion of revised paper describing QPACA's application in the pathway recognition problem on both human and yeast data sets.

3. Issues and Risks

We identified no relevant issues or risks to report in this section for this period.

4. Meeting notes

The following summarizes meeting notes for April:

Meeting notes: April

- In the context of the caBIG National meeting, we had direct contacts with adopters from UPenn (Magellan) and OHSU (QPACA). The meeting with UPenn focused on timing and prioritization of tasks, with the result being completion of the Use Case document.
- The meeting with OHSU focused on a broad overview of QPACA and its application to pathway-based analysis in both human and yeast data sets along with its visualization capabilities. This was a crucial step, which facilitated adoption by OHSU during the month of April.
- April 22: Lab meeting. Chris summarized progress on interaction with UPenn and how he has addressed their concerns with operation of Magellan. Confirmed that they have been able to upload and begin analysis of a number of data sets. Discussed progress in the numerous documents required for caBIG participation. Barbara discussed quantitative results in several control experiments assessing whether QPACA's method for optimizing selection of sample subsets is a significant improvement over no subselection. Her data form a convincing case, which will help in the response to the reviews of her manuscript from NAR.

Submitted by:

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Signature Date

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